

WHAT IS CLAIMED IS:

1. A method for expressing information, comprising the steps of:

expressing by the number of predetermined objects a
3 structure of repeating periodically changing information;
and

expressing the progressing speed of the information by
the distance among the predetermined objects and a moving
object that moves among the predetermined objects.

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2. The method according to claim 1, wherein

the moving object moves among the predetermined objects
at a fixed speed.

15 3. The method according to claim 1, further comprising the
step of:

arranging the predetermined objects in a polygon in
response to the number of those objects.

20 4. The method according to claim 3, wherein a cycle that the
moving object makes full circle of the polygon matches the
cycle of the changing information.

25 5. The method according to claim 1, further comprising the
step of:

setting for each of the predetermined objects a desired

parameter of multiple types of parameters used for forming the predetermined objects.

6. The method according to claim 5, wherein the desired
5 parameter is the display color of the predetermined objects.

7. The method according to claim 1, further comprising the step of:

requesting a manipulating input from a user with the
10 timing of the moving object overlapping with one of the predetermined objects.

8. The method according to claim 7, further comprising the step of:

15 requesting the user to input a desired, manipulating input representative of strength with the timing of the moving object overlapping with one of the predetermined objects.

9. The method according to claim 7, further comprising the
20 step of:

requesting from the user a desired, manipulating input representative of direction with the timing of the moving object overlapping with one of the predetermined objects.

25 10. The method according to claim 7, further comprising the step of:

requesting from a user a manipulating input for
suspending the progression of information with the timing of
the moving object overlapping with one of the predetermined
objects.

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11. The method according to claim 7, further comprising the
step of:

arranging near one of the predetermined objects an
object representative of the quickness/slowness of the
10 manipulating input from the user, which is carried out with
the timing of the moving object overlapping with the one of
the predetermined objects.

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12. The method according to claim 7, further comprising the
step of:

judging the acceptance or rejection of the manipulating
input from the user.

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13. The method according to claim 12, further comprising the
step of:

generating notice information in response to the
judging of the acceptance/rejection for every cycle that
repeats the information changing.

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14. The method according to claim 7, further comprising the
steps of:

setting either a mode specifying the manipulating input or a mode requesting the user to estimate the manipulating input; and

switching between execution and no execution of the request for the manipulating input based upon the set mode.

15. The method according to claim 1, further comprising a number changing step of changing the number of the predetermined objects with a predetermined timing.

16. The method according to claim 15, wherein the number changing step changes the number of the predetermined objects at one cycle before the timing when repeating cycle of the changing information varies.

17. The method according to claim 1, further comprising a distance changing step of changing the distance among the predetermined objects with a predetermined timing.

18. The method according to claim 17, wherein the distance changing step changes the distance among the predetermined objects at one cycle before the timing when the progressing speed of the information varies.

19. The method according to claim 1, wherein the information is musical tone information;

the structure of repeating periodically changing information is the musical rhythm; and

the progressing speed of information is the musical tempo.

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20. A computer-readable recording medium having recorded therein an information-expression processing program to be executed on a computer, the program comprising:

10 a step of expressing by the number of predetermined objects a structure of repeating periodically changing information; and

15 a step of expressing the progressing speed of the information by the distance among the predetermined objects and a moving object that moves among the predetermined objects.

21. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 20, the program further comprising:

20 a step of controlling in order that the moving object moves among the predetermined objects at a fixed speed.

22. The computer-readable recording medium having recorded therein the information-expression processing program

25 according to claim 20, the program further comprising:

a step of arranging the predetermined objects in a

polygon in response to the number of those objects.

23. The computer-readable recording medium having recorded therein the information-expression processing program

5 according to claim 22, the program further comprising:

a step of matching a cycle that the moving object makes full circle of the polygon with the cycle of the changing information.

10 24. The computer-readable recording medium having recorded therein the information-expression processing program

according to claim 20, the program further comprising:

15 a step of setting for each of the predetermined objects a desired parameter of multiple types of parameters used for forming the predetermined objects.

25. The computer-readable recording medium having recorded therein the information-expression processing program

according to claim 24, the program further comprising:

20 a step of setting the display color of the predetermined objects as the desired parameter.

26. The computer-readable recording medium having recorded therein the information-expression processing program

25 according to claim 20, the program further comprising:

a step of requesting a manipulating input from a user

with the timing of the moving object overlapping with one of the predetermined objects.

27. The computer-readable recording medium having recorded
s therein the information-expression processing program according to claim 26, the program further comprising:

10 a step of requesting the user to input a desired, manipulating input representative of strength with the timing of the moving object overlapping with one of the predetermined objects.

28. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 26, the program further comprising:

15 a step of requesting from the user a desired, manipulating input representative of direction with the timing of the moving object overlapping with one of the predetermined objects.

20 29. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 26, the program further comprising:

25 a step of requesting from the user a manipulating input for suspending the progression of information with the timing of the moving object overlapping with one of the predetermined objects.

30. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 26, the program further comprising:

a step of arranging near one of the predetermined objects
5 an object representative of the quickness/slowness of the manipulating input from the user, which is carried out with the timing of the moving object overlapping with the one of the predetermined objects.

10 31. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 26, the program further comprising:

a step of judging the acceptance or rejection of the manipulating input from the user.

15 32. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 31, the program further comprising:

a step of generating notice information in response to
20 the judging of the acceptance/rejection for every cycle that repeats the information changing.

33. The computer-readable recording medium having recorded therein the information-expression processing program
25 according to claim 26, the program further comprising:

a step of setting either a mode specifying the

manipulating input or a mode requesting the user to estimate the manipulating input; and

a step of switching between execution and no execution of the request for the manipulating input based upon the set
5 mode.

34. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 20, the program further comprising:

10 a number changing step of changing the number of the predetermined objects with a predetermined timing.

35. The computer-readable recording medium having recorded therein the information expression processing program
15 according to claim 34, wherein

the number changing step changes the number of the predetermined objects at one cycle before the timing when repeating cycle of the changing information varies.

20 36. The computer-readable recording medium having recorded therein the information-expression processing program according to claim 20, the program further comprising:

a distance changing step of changing the distance among the predetermined objects with a predetermined timing.

25 37. The computer-readable recording medium having recorded

therein the information expression processing program
according to claim 36, wherein

the distance changing step changes the distance among
the predetermined objects at one cycle before the timing when
5 the progressing speed of the information varies.

38. The computer-readable recording medium having recorded
therein the information expression processing program
according to claim 20, wherein

10 the information is musical tone information;

the structure of repeating periodically changing
information is the musical rhythm; and

the progressing speed of information is the musical
tempo.

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39. A program execution apparatus for executing an
information expression processing program, the program
comprising:

a step of expressing by the number of predetermined
20 objects a structure of repeating periodically changing
information; and

a step of expressing the progressing speed of the
information by the distance among the predetermined objects
and a moving object that moves among the predetermined
25 objects.

40. The program execution apparatus for executing the information expression-processing program according to claim 39, the program further comprising:

a step of controlling in order that the moving object
5 moves among the predetermined objects at a fixed speed.

41. The program execution apparatus for executing the information expression-processing program according to claim 39, the program further comprising:

10 a step of arranging the predetermined objects in a polygon in response to the number of those objects.

42. The program execution apparatus for executing the information expression-processing program according to claim
15 41, the program further comprising:

a step of matching a cycle that the moving object makes full circle of the polygon with the cycle of the changing information.

20 43. The program execution apparatus for executing the information expression-processing program according to claim 39, the program further comprising:

a step of setting for each of the predetermined objects a desired parameter of multiple types of parameters used for
25 forming the predetermined objects.

44. The program execution apparatus for executing the information expression-processing program according to claim 43, the program further comprising:

5 a step of setting the display color of the predetermined objects as the desired parameter.

45. The program execution apparatus for executing the information expression-processing program according to claim 39, the program further comprising:

10 a step of requesting a manipulating input from a user with the timing of the moving object overlapping with one of the predetermined objects.

46. The program execution apparatus for executing the information expression-processing program according to claim 45, the program further comprising:

15 a step of requesting the user to input a desired, manipulating input representative of strength with the timing of the moving object overlapping with one of the predetermined objects.

47. The program execution apparatus for executing the information expression-processing program according to claim 45, the program further comprising:

25 a step of requesting from the user a desired, manipulating input representative of direction with the

timing of the moving object overlapping with one of the predetermined objects.

48. The program execution apparatus for executing the
5 information expression-processing program according to claim 45, the program further comprising:

a step of requesting from the user a manipulating input for suspending the progression of information with the timing of the moving object overlapping with one of the predetermined
10 objects.

49. The program execution apparatus for executing the information expression-processing program according to claim 45, the program further comprising:

15 a step of arranging near one of the predetermined objects an object representative of the quickness/slowness of the manipulating input from the user, which is carried out with the timing of the moving object overlapping with the one of the predetermined objects.

20 50. The program execution apparatus for executing the information expression-processing program according to claim 45, the program further comprising:

a step of judging the acceptance or rejection of the
25 manipulating input from the user.

51. The program execution apparatus for executing the information expression-processing program according to claim 50, the program further comprising:

5 a step of generating notice information in response to the judging of the acceptance/rejection for every cycle that repeats the information changing.

52. The program execution apparatus for executing the information expression-processing program according to claim 10 45, the program further comprising:

a step of setting either a mode specifying the manipulating input or a mode requesting the user to estimate the manipulating input; and

15 a step of switching between execution and no execution of the request for the manipulating input based upon the set mode.

53. The program execution apparatus for executing the information expression-processing program according to claim 20 39, the program further comprising:

a number changing step of changing the number of the predetermined objects with a predetermined timing.

54. The program execution apparatus for executing the 25 information expression-processing program according to claim 53, the program further comprising:

the number changing step changes the number of the predetermined objects at one cycle before the timing when repeating cycle of the changing information varies.

5 55. The program execution apparatus for executing the information expression-processing program according to claim 39, the program further comprising:

a distance changing step of changing the distance among the predetermined objects with a predetermined timing.

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56. The program execution apparatus for executing the information expression-processing program according to claim 55, the program further comprising:

15 the distance changing step changes the distance among the predetermined objects at one cycle before the timing when the progressing speed of the information varies.

57. The program execution apparatus for executing the information expression processing program according to claim 20 55, wherein

the information is musical tone information;

the structure of repeating periodically changing information is the musical rhythm; and

25 the progressing speed of information is the musical tempo.

58. An information-expression processing program to be executed on a computer, comprising:

a step of expressing by the number of predetermined objects a structure of repeating periodically changing

5 information; and

a step of expressing the progressing speed of the information by the distance among the predetermined objects and a moving object that moves among the predetermined objects.

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